

CLAIMS

1. A sheet paper identification device that images an image of sheet paper by means of an image pickup section and identifies the sheet paper on the basis of the image thus imaged, comprising:

first image acquisition means for acquiring a first picked-up image in a state where there is no sheet paper in the image pickup section;

second image acquisition means for acquiring a second picked-up image in a state where there is sheet paper in the image pickup section;

unwanted image discrimination means for discriminating an unwanted image in the second picked-up image on the basis of the first picked-up image acquired by the first image acquisition means and the second picked-up image acquired by the second image acquisition means; and

sheet paper identification means for identifying the sheet paper on the basis of the second picked-up image acquired by the second image acquisition means and the unwanted image discriminated by the unwanted image discrimination means.

2. The sheet paper identification device according to claim 1, wherein the image pickup section comprises:

irradiation means for irradiating the sheet paper;

a feed path for feeding the sheet paper; and

image pickup means for imaging transmitted light of the sheet paper on the feed path.

3. The sheet paper identification device according to claim 1, wherein the unwanted image discrimination means comprises measurement means for measuring the position and area of an image in the first picked-up image acquired by the first image acquisition means, and discriminates an image that exists in the second picked-up image acquired by the second image acquisition means in the same position and over the same area as the image measured by the measurement means as an unwanted image.

4. The sheet paper identification device according to claim 3, wherein the sheet paper identification means attaches the unwanted image discriminated by the unwanted image discrimination means to standard data found beforehand from genuine sheet paper in the same position and over the same area, and identifies the sheet paper by comparing the standard data to which the unwanted image is attached with image data corresponding to the second picked-up image acquired by the second image acquisition means.

5. The sheet paper identification device according to claim 1, further comprising abnormal state communication means for communicating an abnormal state when the unwanted image discriminated by the unwanted image discrimination means exceeds a predetermined value that is preset.

6. A sheet paper identification method that images an image of sheet paper by means of an image pickup section and identifies the sheet paper on the basis of the image thus imaged, comprising:

acquiring a first picked-up image in a state where there is no sheet paper in the interior of the image pickup section;

acquiring a second picked-up image in a state where there is a sheet paper in the image pickup section;

discriminating an unwanted image in the second picked-up image on the basis of the first picked-up image and the second picked-up image; and

identifying the sheet paper on the basis of the unwanted image thus discriminated and the second picked-up image.

7. The sheet paper identification method according to claim 6, wherein the image pickup section irradiates light onto the sheet paper and images transmitted light of the sheet paper on the feed path for feeding the sheet paper.

8. The sheet paper identification method according to claim 6, wherein the position and area of the image in the first picked-up image are measured, and an image that exists in the second picked-up image in the same position and over the same area as the

measured image is discriminated as an unwanted image.

9. The sheet paper identification method according to claim 8, wherein the unwanted image is attached in the same position and over the same area to the standard data found beforehand from genuine sheet paper, and the sheet paper is identified by comparing standard data to which the unwanted image is attached with image data that corresponds to the second picked-up image.

10. The sheet paper identification method according to claim 6, wherein an abnormal state is communicated when the unwanted image exceeds a predetermined value that is preset.